

REMARKS

In the non-final Office Action, the Examiner rejects claims 1, 3-9, 12-15 and 17-19 under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter; rejects claims 13 and 17 under 35 U.S.C. § 102(a) as allegedly anticipated by the non-patent literature document entitled "Winnowing: Local Algorithms for Document Fingerprinting" by Schleimer et al. (hereinafter "SCHLEIMER"); rejects claims 1, 5, 6, 8, 11, 20, 24, 26 and 28 under 35 U.S.C. § 103(a) as allegedly unpatentable over SCHLEIMER; rejects claims 1, 5-8, 31-32, and 34-36 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 5,745,900B1 to Burrows (hereinafter "BURROWS") in view of U.S. Patent Application Publication No. 2002/0133499 A1 to Ward et al. (hereinafter "WARD") and SCHLEIMER; rejects claims 3, 4, 11 and 12 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS, WARD and SCHLEIMER and further view of U.S. Patent No. 6,230,155 B1 to Broder et al. (hereinafter "BRODER"); rejects claims 13 and 17 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD; rejects claims 14 and 15 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS, WARD, and further in view of BRODER; rejects claim 20 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of SCHLEIMER; rejects claims 22 and 23 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS and SCHLEIMER and further in view of the non-patent literature document entitled ("Similarity Estimation Techniques from Rounding Algorithms" by Charikar (hereinafter "CHARIKAR"); rejects claims 24 and 25 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROW and SCHLEIMER in view of WARD; rejects claims 26, 28 and 29 under 35 U.S.C. § 103(a) as allegedly being unpatentable over BURROWS and SCHLEIMER in view of WARD; rejects claims 9, 18, 30,

and 33 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD and SCHLEIMER and further in view of OFFICIAL NOTICE; rejects claim 19 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD and further in view of OFFICIAL NOTICE; and rejects claim 21 under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS, and further in view of OFFICIAL NOTICE. Applicant respectfully traverses these rejections.

By way of the Amendment, Applicant amends claims 1, 6, 7, 13, 17-20, 26, and 30-34 to improve form, and cancels claims 5 without prejudice or disclaimer. No new matter has been added by the present Amendment. Claims 1, 3-4, 6-9, 11-15, 17-26, and 28-36 are pending.

Rejection under 35. U.S.C. § 101

Pending claims 1, 3-4, 6-9, 12-15 and 17-19 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicant respectfully traverses this rejection.

The Examiner alleges that claims 1, 3-9, 12-15, and 17-19 are not tied to a particular machine and are therefore not directed to statutory subject matter (Office Action, p. 5). Without acquiescing in the Examiner's rejection of pending claims 1, 3-4, 6-9, 12-15 and 17-19, Applicant has amended independent method claims 1 and 13 to address the Examiner's concerns and in order to expedite prosecution.

For at least the foregoing reasons, Applicant submits that claims 1 and 13 are directed to statutory subject matter. Accordingly, Applicant respectfully requests that the rejection of claims 1 and 13 under 35 U.S.C. § 101 be reconsidered and withdrawn.

Pending claims 3-4 and 6-9 depend from claim 1. Therefore, these claims are directed to statutory subject matter for at least the reasons set forth above with respect to claim 1. .
Accordingly, Applicant respectfully requests that the rejection of claims 3-4 and 6-9 under 35 U.S.C. § 101 be reconsidered and withdrawn.

Pending claims 12-15 and 17-19 depend from claim 13. Therefore, these claims are directed to statutory subject matter for at least the reasons set forth above with respect to claim 13. Accordingly, Applicant respectfully requests that the rejection of claims 12-15 and 17-19 under 35 U.S.C. § 101 be reconsidered and withdrawn.

Rejection under 35. U.S.C. § 102(a) based on SCHLEIMER

Claims 13 and 17 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by SCHLEIMER. Applicant respectfully traverses this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a reference teach every aspect of the claimed invention. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. SCHLEIMER does not disclose the combination of features recited in Applicants' claims 13 and 17.

Amended independent claim 13 is directed to a method for generating a fingerprint of a document, performed by one or more server devices. The method includes sampling, by a processor associated with the one or more server devices, the document to obtain a plurality of overlapping samples; generating, by a processor associated with the one or more server devices, a set of checksum values from the plurality of overlapping samples; selecting, by a processor associated with the one or more server devices, a subset of the set of checksum values as those of

the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values; addressing, by a processor associated with the one or more server devices, a particular bit of the fingerprint with a particular checksum value; and flipping, by a processor associated with the one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset. SCHLEIMER does not disclose or suggest this combination of features.

For example, SCHLEIMER does not disclose or suggest selecting, by a processor associated with one or more server devices, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values, as recited in amended claim 13.

The Examiner relies on Section 3 and Fig. 2(e) of SCHEIMER for allegedly disclosing “choosing a subset of checksum values” (Office Action, pp. 5-6). Claim 13 does not recite choosing a subset of checksum values. Amended claim 13 specifically recites selecting, by a processor, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values.

All words in a claim must be considered in judging the patentability of that claim against the cited references. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See M.P.E.P. 2143.03. In this case, the Examiner appears to be disregarding that this feature of claim 13 recites that the subset of the set of checksum values is selected as those of the checksum

values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values.

Nevertheless, Applicant submits that this section (or any other section) of SCHLEIMER does not disclose or suggest the above feature of claim 13, amended as proposed.

Section 3 of SCHLEIMER, which describes Figs. 2(a)-2(g) of SCHLEIMER, discloses the winnowing algorithm for selecting fingerprints from hashes of k -grams. In the example of Fig. 2(a)-2(g) of SCHLEIMER, a set of overlapping 5-grams is generated from a set of text (Fig. 2(c) of SCHLEIMER). A sequence of hashes is then generated from the sequence of 5-grams (Fig. 2(d) of SCHLEIMER). Next, a sequence of overlapping windows of the hashes is generated (Fig. 2(e) of SCHLEIMER), followed by the selection of the minimum hash from each window (Fig. 2(f) of SCHLEIMER). This sequence of minimum hashes becomes the fingerprint of the text.

This section of SCHLEIMER does not disclose or suggest selecting a predetermined number of smallest checksum values or a predetermined number of largest checksum values. Rather, this section of SCHLEIMER discloses selecting the minimum hash value in each window. Therefore, this section of SCHLEIMER cannot disclose or suggest selecting, by a processor associated with one or more server devices, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values, as recited in amended claim 13.

In the Response to Arguments section of the Office Action, the Examiner alleges that the use of "checksum" to generate a fingerprint is very old (Office Action, p. 3). Applicant again respectfully submits that claim 13 does merely recite using a checksum to generate a fingerprint.

Rather, claim 13 specifically recites selecting, by a processor, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values.

The Examiner further alleges that there is not requirement that checksum values generated have to have any relation to the overlapping blocks (Office Action, p. 3). Applicant disagrees with the Examiner's allegation and submits that a reasonable interpretation of claim 13 would lead one of ordinary skill in the art at the time of the invention to interpret the checksum values as based on the overlapping blocks. Nevertheless, Applicant has amended claim to recite generating, by the processor, a set of checksum values from the plurality of overlapping samples in order to expedite prosecution.

Furthermore, SCHLEIMER does not disclose or suggest addressing, by a processor associated with one or more server devices, a particular bit of the fingerprint with a particular checksum value, as also recited in amended claim 13. In fact, SCHLEIMER does not disclose, suggest, or even mention addressing bits of a fingerprint. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically indicate which sections of SCHLEIMER allegedly disclose this feature of amended claim 13.

Moreover, SCHLEIMER does not disclose or suggest flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as also recited in amended claim 13. The Examiner relies on Section 3 and item (g) of Fig. 2 of SCHLEIMER for allegedly disclosing "compacting the subset of the overlapping blocks to

obtain the representation of the document” (Office Action, p. 6). Applicant submits that this section (or any other section) of SCHLEIMER does not disclose or suggest the above-noted feature of amended claim 13.

Section 3 of SCHLEIMER, which describes Figs. 2(a)-2(g) of SCHLEIMER, discloses the winnowing algorithm for selecting fingerprints from hashes of k -grams. In the example of Fig. 2(a)-2(g) of SCHLEIMER, a set of overlapping 5-grams is generated from a set of text (Fig. 2(c) of SCHLEIMER). A sequence of hashes is then generated from the sequence of 5-grams (Fig. 2(d) of SCHLEIMER). Next, a sequence of overlapping windows of the hashes is generated (Fig. 2(e) of SCHLEIMER), followed by the selection of the minimum hash from each window (Fig. 2(f) of SCHLEIMER). This sequence of minimum hashes becomes the fingerprint of the text.

This section (or any other section) of SCHLEIMER does not disclose or suggest any flipping of bits of the fingerprint, let alone flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as recited in amended claim 13.

Item (g) of Fig. 2 of SCHLEIMER depicts fingerprints for the text shown in item (a) of Fig. 2 of SCHLEIMER. This section (or any other section) of SCHLEIMER does not disclose or suggest any flipping of bits of the fingerprint, let alone flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of checksum values (the

particular checksum value addressing the particular bit of the fingerprint), as recited in amended claim 13.

In the Response to Arguments section of the Office Action, the Examiner alleges that the previously presented phrase “where a number of times a particular bit is flipped is based on a number of checksum values in subset that corresponds to the particular value addressed to the particular bit” is intended use (Office Action, pp. 3-4). Applicant disagrees with the Examiner's allegation. The Examiner has not provided any evidence as to why the phrase should be considered intended use. Nevertheless, Applicant submits that the Examiner cannot reasonably consider the above-noted feature of amended claim 13 as intended use.

For at least the foregoing reasons, Applicant submits that claim 13 is not anticipated by SCHLEIMER. Accordingly, Applicant respectfully requests that the rejection of claim 13 under 35 U.S.C. § 102(a) based on SCHLEIMER be reconsidered and withdrawn.

Claim 17 depends from claim 13. Therefore, claim 17 is not anticipated by SCHLEIMER for at least the reasons set forth above with respect to claim 13. Accordingly, Applicant respectfully requests that the rejection of claims 13 and 17 under 35 U.S.C. § 102(a) based on SCHLEIMER be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on SCHLEIMER

Pending claims 1, 6, 8, 11, 20, 24, 26 and 28 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over SCHLEIMER. Applicant respectfully traverses this rejection.

Amended independent claim 1 is directed to a method for generating a fingerprint of a document, performed by one or more server devices. The method includes obtaining, by a

processor associated with the one or more server devices, a plurality of overlapping blocks by sampling the document; generating, by a processor associated with the one or more server devices, a set of checksum values from the plurality of overlapping blocks; choosing, by a processor associated with the one or more server devices, a subset of the set of checksum values, where the subset is less than an entirety of the set of checksum values; initializing, by a processor associated with the one or more server devices, the fingerprint of the document by setting all bits of the fingerprint to zero; addressing, by a processor associated with the one or more server devices, a particular bit of the fingerprint with a particular checksum value; and flipping, by a processor associated with the one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset. SCHLEIMER does not disclose or suggest this combination of features.

For example, SCHLEIMER does not disclose or suggest addressing, by a processor associated with one or more server devices, a particular bit of the fingerprint with a particular checksum value, as recited in amended claim 1. As stated above with respect to claim 13, SCHLEIMER does not disclose, suggest, or even mention addressing bits of a fingerprint. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically indicate which sections of SCHLEIMER allegedly disclose this feature of amended claim 1.

Furthermore, SCHLEIMER does not disclose or suggest flipping, by a processor associated with one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as also recited in amended claim 1. The Examiner relies on Section 3 and item (c) of Fig. 2 of

SCHLEIMER for allegedly disclosing “compacting the subset of the overlapping blocks to obtain the representation of the document” (Office Action, p. 7). Applicant submits that this section (or any other section) of SCHLEIMER does not disclose or suggest the above-noted feature of amended claim 1.

Section 3 of SCHLEIMER, which describes Figs. 2(a)-2(g) of SCHLEIMER, discloses the winnowing algorithm for selecting fingerprints from hashes of k -grams. In the example of Fig. 2(a)-2(g) of SCHLEIMER, a set of overlapping 5-grams is generated from a set of text (Fig. 2(c) of SCHLEIMER). A sequence of hashes is then generated from the sequence of 5-grams (Fig. 2(d) of SCHLEIMER). Next, a sequence of overlapping windows of the hashes is generated (Fig. 2(e) of SCHLEIMER), followed by the selection of the minimum hash from each window (Fig. 2(f) of SCHLEIMER). This sequence of minimum hashes becomes the fingerprint of the text.

This section (or any other section) of SCHLEIMER does not disclose or suggest any flipping of bits of the fingerprint, let alone flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as recited in amended claim 1.

Item (c) of Fig. 2 of SCHLEIMER depicts windows of hashes of length 4 for the text shown in item (a) of Fig. 2 of SCHLEIMER. This section (or any other section) of SCHLEIMER does not disclose or suggest any flipping of bits of the fingerprint, let alone flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of

checksum values (the particular checksum value addressing the particular bit of the fingerprint), as recited in amended claim 1.

In the Response to Arguments section of the Office Action, the Examiner alleges that the previously presented phrase “where a number of times a particular bit is flipped is based on a number of checksum values in subset that corresponds to the particular value addressed to the particular bit” is intended use (Office Action, pp. 3-4). As stated above with respect to claim 13, Applicant disagrees with the Examiner's allegation. The Examiner has not provided any evidence as to why the phrase should be considered intended use. Nevertheless, Applicant submits that the Examiner cannot reasonably consider the above-noted feature of amended claim 1 as intended use.

For at least the foregoing reasons, Applicant submits that claim 1 is patentable over SCHLEIMER. Accordingly, Applicant respectfully requests that the rejection of claims 1 under 35 U.S.C. § 103(a) based on SCHLEIMER be reconsidered and withdrawn.

Pending claims 6, 8 and 11 depend from claim 1. Therefore, these claims are patentable over SCHLEIMER for at least the reasons set forth above with respect to claim 1. Accordingly, Applicant respectfully requests that the rejection of claims 6, 8, and 11 under 35 U.S.C. § 103(a) based on SCHLEIMER be reconsidered and withdrawn.

Independent claims 20 and 26 recite features similar to, yet possibly of different scope than, features discussed above with respect to claim 1. Therefore, these claims are patentable over SCHLEIMER for at least the reasons set forth above with respect to claim 1. Accordingly, Applicant respectfully requests that the rejection of claims 20 and 26 under 35 U.S.C. § 103(a) based on SCHLEIMER be reconsidered and withdrawn.

Claim 24 depends from claim 20. Therefore, this claim is patentable over SCHLEIMER for at least the reasons set forth above with respect to claim 20. Accordingly, Applicant respectfully requests that the rejection of claim 24 under 35 U.S.C. § 103(a) based on SCHLEIMER be reconsidered and withdrawn.

Claim 28 depends from claim 26. Therefore, this claim is patentable over SCHLEIMER for at least the reasons set forth above with respect to claim 26. Accordingly, Applicant respectfully requests that the rejection of claim 28 under 35 U.S.C. § 103(a) based on SCHLEIMER be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER

Pending claims 1, 6-8, 31, 32, and 34-36 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD and SCHLEIMER. Applicant respectfully traverse this rejection.

Amended independent claim 1 is directed to a method for generating a fingerprint of a document, performed by one or more server devices. The method includes obtaining, by a processor associated with the one or more server devices, a plurality of overlapping blocks by sampling the document; generating, by a processor associated with the one or more server devices, a set of checksum values from the plurality of overlapping blocks; choosing, by a processor associated with the one or more server devices, a subset of the set of checksum values, where the subset is less than an entirety of the set of checksum values; initializing, by a processor associated with the one or more server devices, the fingerprint of the document by setting all bits of the fingerprint to zero; addressing, by a processor associated with the one or more server

devices, a particular bit of the fingerprint with a particular checksum value; and flipping, by a processor associated with the one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset. BURROWS, WARD, and SCHLEIMER, whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, BURROWS, WARD, and SCHLEIMER do not disclose or suggest addressing, by a processor associated with one or more server devices, a particular bit of the fingerprint of a document with a particular checksum value, as recited in claim 1. BURROWS also does not disclose, suggest, or even mention addressing bits of a fingerprint. In fact, the term "address" only appears in BURROWS as indexing duplicate information stored as records having different unique addresses in a database (see, for example, col. 1, lines 48-50 of BURROWS). WARD also does not disclose, suggest, or even mention addressing bits of a fingerprint. In fact, the term "address" does not appear in the disclosure of WARD. As stated above, SCHLEIMER also does not disclose, suggest, or even mention addressing bits of a fingerprint. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically indicate which sections of BURROWS, WARD, or SCHLEIMER allegedly disclose this feature of amended claim 1.

Furthermore, BURROWS, WARD, and SCHLEIMER do not disclose or suggest flipping, by a processor associated with one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as also recited in amended claim 1. The Examiner relies on Fig. 5 of

BURROWS for allegedly disclosing "setting bits in the representation of the document based on the subset of overlapping blocks" (Office Action, p. 10). Applicant submits that this section (or any other section) of BURROWS does not disclose or suggest the above-noted feature of amended claim 1.

Fig. 5 of BURROWS, described in col. 9, lines 33-41 of BURROWS, shows a view of the words and metawords produced by the parsing module of BURROWS. The parsing module produces a sequence of pairs in a collating order according to the location of the words of various pages.

Fig. 5 of BURROWS does not disclose or suggest flipping bits of a fingerprint of documents, let alone flipping, by a processor associated with one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as recited in amended claim 1.

The disclosures of WARD and SCHLEIMER do not overcome the deficiencies in the disclosure of BURROWS set forth above with respect to the above-noted feature of amended claim 1.

Therefore, even if SCHLEIMER and WARD were to be combined with BURROWS, the combination would not disclose or suggest each of the features of claim 1. Further, even if for the sake of argument, the combination of BURROWS, WARD, and SCHLEIMER could be fairly construed to disclose or suggest each of the features of claim 1, Applicant asserts that the reasons for combining BURROWS, WARD, and SCHLEIMER do not satisfy the requirements of 35 U.S.C. § 103.

For example, with respect to the reasons for combining BURROWS and WARD the Examiner alleges (Office Action, p. 10):

It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al, with the method of Burrows because it allows for quicker indexing and a higher accuracy of the resulting samples.

With respect to SCHLEIMER, the Examiner alleges (Office Action, p. 11):

It would have been obvious to a person of ordinary skill in the art at the time of invention to reorder the steps of Schleimer et al. because it leads to improved efficiency.

Applicant submits that the Examiner's allegations are merely conclusory statements of alleged benefits of the combination. Such conclusory statements have been repeatedly held to be insufficient for establishing a *prima facie* case of obviousness. In this respect, Applicant relies upon KSR International Co. v. Teleflex Inc., 550 U.S. 398, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007) (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)), where it was held that rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. In this case, no such articulated reasoning has been provided with respect to claim 1.

For at least the foregoing reasons, Applicant submits that claim 1 is patentable over BURROWS, WARD, and SCHLEIMER. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER be reconsidered and withdrawn.

Pending claims 6-8 depend from claim 1. Therefore, these claims are patentable over BURROWS, WARD, and SCHLEIMER, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 1. Accordingly, Applicant

respectfully requests that the rejection of claims 5-8 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER be reconsidered and withdrawn.

Amended independent claim 31 recites features similar to, yet possibly of different scope than, features discussed above with respect to claim 13. Without acquiescing in the Examiner's rejection, Applicant submits that the disclosure of SCHLEIMER does not overcome the deficiencies in the disclosures of BURROWS and WARD set forth below with respect to claim 13. Therefore, claim 31 is patentable over BURROWS, WARD, and SCHLEIMER, whether taken alone or in any reasonable combination, for at least reasons similar to the reasons set forth above with respect to claim 13. Accordingly, Applicant respectfully requests that the rejection of claim 31 under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and WARD be reconsidered and withdrawn.

Claim 32 depends from claim 31. Therefore, claim 32 is patentable over BURROWS, WARD, and SCHLEIMER, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 31. Accordingly, Applicant respectfully requests that the rejection of claim 32 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER be reconsidered and withdrawn.

Independent claim 34 recites features similar to, yet possibly of different scope than, features discussed above with respect to claim 1. Therefore, claim 34 is patentable over BURROWS, WARD, and SCHLEIMER, whether taken alone or in any reasonable combination, for at least reasons similar to the reasons set forth above with respect to claim 1. Accordingly, Applicant respectfully requests that the rejection of claim 34 under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and WARD be reconsidered and withdrawn.

Claim 35 and 36 depend from claim 34. Therefore, claims 35 and 36 are patentable over BURROWS, WARD, and SCHLEIMER, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 34. Accordingly, Applicant respectfully requests that the rejection of claims 35 and 36 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER, and BRODER

Claims 3, 4, 11, and 12 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS, WARD and SCHLEIMER as applied to claim 1, and further in view of BRODER. Applicant respectfully traverses this rejection.

Claims 3, 4, 11, and 12 depend from claim 1. Without acquiescing in the Examiner's rejection of claims 3, 4, 11, and 12, Applicant submits that the disclosure of BRODER does not overcome the deficiencies in the disclosures of BURROWS, WARD and SCHLEIMER set forth above with respect to claim 1. Therefore, these claims are patentable over BURROWS, WARD, SCHLEIMER, and BRODER, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 1. Accordingly, Applicant respectfully requests that the rejection of claims 3, 4, 11, and 12 under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER, and BRODER be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS and WARD

Claims 13 and 17 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD. Applicant respectfully traverses this rejection.

Amended independent claim 13 is directed to a method for generating a fingerprint of a document, performed by one or more server devices. The method includes sampling, by a processor associated with the one or more server devices, the document to obtain a plurality of overlapping samples; generating, by a processor associated with the one or more server devices, a set of checksum values from the plurality of overlapping samples; selecting, by a processor associated with the one or more server devices, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values; addressing, by a processor associated with the one or more server devices, a particular bit of the fingerprint with a particular checksum value; and flipping, by a processor associated with the one or more server devices, the particular bit of the fingerprint a number of times corresponding to a number of times the particular checksum value occurs in the subset. BURROWS and WARD, whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, BURROWS and WARD do not disclose or suggest selecting, by a processor associated with one or more server devices, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values, as recited in amended claim 13.

The Examiner relies on Fig. 4 of BURROWS for allegedly disclosing “choosing a subset of overlapping blocks” (Office Action, p. 14). Claim 13 does not recite choosing a subset of overlapping blocks. Amended claim 13 specifically recites selecting, by a processor associated with one or more server devices, a subset of the set of checksum values as those of the checksum

values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values.

As stated above, all words in a claim must be considered in judging the patentability of that claim against the cited references. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See M.P.E.P. 2143.03. In this case, the Examiner appears to be disregarding that this feature of claim 13 recites that the subset of the set of checksum values is selected as those of the checksum values corresponding to a predetermined number of smallest checksum values or a predetermined number of largest checksum values.

Nevertheless, Applicant submits that this section (or any other section) of BURROWS does not disclose or suggest the above feature of claim 13, amended as proposed.

Fig. 4 of BURROWS, which is described in col. 7, line 41 to col. 9, line 32, depicts a block diagram of content attributes generated by the search engine. Fig. 4 shows portions of a page, labeled as 230, 240, 250, and 260, which are detected and encoded by a parsing module. The parsing module generates attribute values for entire pages, portions of a page, fields, or individual words and the parser stores these attribute values as searchable metawords. The fingerprint 255 of Fig. 4 can be one of these metawords. BURROWS specifically discloses that fingerprint 255 can be produced by applying one-way polynomial functions to the digitized content of the document (col. 8, lines 16-23 of BURROWS).

This section of BURROWS does not disclose or suggests anything about selecting a predetermined number of checksum values. Therefore, this section of BURROWS cannot disclose or suggest selecting, by a processor associated with one or more server devices, a subset of the set of checksum values as those of the checksum values corresponding to a predetermined

number of smallest checksum values or a predetermined number of largest checksum values, as recited in amended claim 13.

The disclosure of WARD does not overcome the deficiencies in the disclosure of BURROWS set forth above with respect to the above-noted feature of claim 13.

Furthermore, BURROWS and WARD do not disclose or suggest flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as also recited in amended claim 13. The Examiner relies on Fig. 5 of BURROWS for allegedly disclosing "setting bits in the representation of the document based on the subset of overlapping blocks" (Office Action, p. 14). Applicant submits that this section (or any other section) of BURROWS does not disclose or suggest the above-noted feature of amended claim 13.

Fig. 5 of BURROWS, described in col. 9, lines 33-41 of BURROWS, shows a view of the words and metawords produced by the parsing module of BURROWS. The parsing module produces a sequence of pairs in a collating order according to the location of the words of various pages.

Fig. 5 of BURROWS does not disclose or suggest flipping bits of a fingerprint of documents, let alone flipping, by a processor associated with one or more server devices, a particular bit of the fingerprint a number of times corresponding to a number of times a particular checksum value occurs in the subset of checksum values (the particular checksum value addressing the particular bit of the fingerprint), as also recited in amended claim 13.

The disclosures of WARD and SCHLEIMER do not overcome the deficiencies in the disclosure of BURROWS set forth above with respect to the above-noted feature of amended claim 13.

For at least the foregoing reasons, Applicant submits that claim 13 is patentable over BURROWS and WARD, whether taken alone or in any reasonable combination. Accordingly, Applicant respectfully requests that the rejection of claim 13 under 35 U.S.C. § 103(a) based on BURROWS and WARD be reconsidered and withdrawn.

Claim 17 depends from claim 13. Therefore, this claim is patentable over BURROWS and WARD for at least the reasons set forth above with respect to claim 13. Accordingly, Applicant respectfully requests that the rejection of claim 17 under 35 U.S.C. § 103(a) based on BURROWS and WARD be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, WARD, and BRODER

Claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS and WARD and further in view of BRODER. Applicant respectfully traverses this rejection.

Claims 14 and 15 depend from claim 13. Without acquiescing in the Examiner's rejection of claims 14 and 15, Applicant submits that the disclosure of BRODER does not overcome the deficiencies in the disclosures of BURROWS and WARD set forth above with respect to claim 13. Therefore, these claims are patentable over BURROWS, WARD, and BRODER, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 13. Accordingly, Applicant respectfully requests that the

rejection of claims 14 and 15 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and BRODER be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS and SCHLEIMER

Claim 20 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of SCHLEIMER. Applicant respectfully traverses this rejection.

Amended independent claim 20 recites features similar to, yet possibly of different scope than, features discussed above with respect to claim 1. Therefore, claim 20 is patentable over BURROWS and SCHLEIMER, whether taken alone or in any reasonable combination, for at least reasons similar to the reasons set forth above with respect to the rejection of claim 1 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER. Accordingly, Applicant respectfully requests that the rejection of claim 20 under 35 U.S.C. § 103(a) based on BURROWS and SCHLEIMER be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and CHARIKAR

Claims 22 and 23 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS and SCHLEIMER, and further in view of CHARIKAR. Applicant respectfully traverses this rejection.

Claims 22 and 23 depend from claim 20. Without acquiescing in the Examiner's rejection of claims 22 and 23, Applicant submits that the disclosure of CHARIKAR does not overcome the deficiencies in the disclosures of BURROWS and SCHLEIMER set forth above with respect to claim 20. Therefore, claims 22 and 23 are patentable over BURROWS,

SCHLEIMER, and CHARIKAR, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 20. Accordingly, Applicant respectfully requests that the rejection of claims 22 and 23 under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and CHARIKAR be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and WARD

Claims 24-26, and 28-29 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS and SCHLEIMER, and further in view of WARD. Applicant respectfully traverses this rejection.

Claims 24-25 depend from claim 20. Without acquiescing in the Examiner's rejection of claims 24-25, Applicant submits that the disclosure of WARD does not overcome the deficiencies in the disclosures of BURROWS and SCHLEIMER set forth above with respect to claim 20. Therefore, claims 24-25 are patentable over BURROWS, SCHLEIMER, and WARD, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 20. Accordingly, Applicant respectfully requests that the rejection of claims 24-25 under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and WARD be reconsidered and withdrawn.

Amended independent claim 26 recites features similar to, yet possibly of different scope than, features discussed above with respect to claim 1. Therefore, claim 26 is patentable over BURROWS, SCHLEIMER, and WARD, whether taken alone or in any reasonable combination, for at least reasons similar to the reasons set forth above with respect to the rejection of claim 1 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and SCHLEIMER. Accordingly,

Applicant respectfully requests that the rejection of claim 26 under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and WARD be reconsidered and withdrawn.

Pending claims 28-29 depend from claim 26. Therefore, claims 28-29 are patentable over BURROWS, SCHLEIMER, and WARD, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 26. Accordingly, Applicant respectfully requests that the rejection of claims 28-29 under 35 U.S.C. § 103(a) based on BURROWS, SCHLEIMER, and WARD be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER and

OFFICIAL NOTICE

Claims 9, 18, 30, and 33 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD and SCHLEIMER and further in view of OFFICIAL NOTICE. Applicant respectfully traverses this rejection.

In the Response to Arguments section of the Office Action, the Examiner relies on U.S. Patent No. 4,290,105 to Cichelli et al. (hereinafter "CICHELLI") as evidence for backing up the Examiner's taking of OFFICIAL NOTICE (Office Action, p. 4). Therefore, Applicant will address this rejection as a rejection of claims 9, 18, 30, and 33 under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER, and CICHELLI.

Claim 9 depends from claim 1. Without acquiescing in the Examiner's rejection of claim 9, Applicant submits that the disclosure of CICHELLI does not overcome the deficiencies in the disclosures of BURROWS, WARD, and SCHLEIMER set forth above with respect to claim 1. Therefore, this claim is patentable over BURROWS, WARD, SCHLEIMER and CICHELLI for

at least the reasons set forth above with respect to claim 1. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 9 under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER and CICHELLI be reconsidered and withdrawn.

Claim 18 depends from claim 13. Without acquiescing in the Examiner's rejection of claim 18, Applicant submits that the disclosure of CICHELLI does not overcome the deficiencies in the disclosures of BURROWS, WARD, and SCHLEIMER set forth above with respect to claim 13. Therefore, this claim is patentable over BURROWS, WARD, SCHLEIMER and CICHELLI for at least the reasons set forth above with respect to claim 13. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 18 under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER and CICHELLI be reconsidered and withdrawn.

Claim 30 depends from claim 27. Without acquiescing in the Examiner's rejection of claim 30, Applicant submits that the disclosure of CICHELLI does not overcome the deficiencies in the disclosures of BURROWS, WARD, and SCHLEIMER set forth above with respect to claim 27. Therefore, this claim is patentable over BURROWS, WARD, SCHLEIMER and CICHELLI for at least the reasons set forth above with respect to claim 27. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 30 under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER, and CICHELLI be reconsidered and withdrawn.

Claim 33 depends from claim 32. Without acquiescing in the Examiner's rejection of claim 33, Applicant submits that the disclosure of CICHELLI does not overcome the deficiencies in the disclosures of BURROWS, WARD, and SCHLEIMER set forth above with respect to

claim 32. Therefore, this claim is patentable over BURROWS, WARD, SCHLEIMER and CICHELLI for at least the reasons set forth above with respect to claim 32. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 33 under 35 U.S.C. § 103(a) based on BURROWS, WARD, SCHLEIMER, and CICHELLI be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS, WARD, and OFFICIAL NOTICE

Claim 19 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of WARD and further in view of OFFICIAL NOTICE. Applicant respectfully traverses this rejection.

In the Response to Arguments section of the Office Action, the Examiner relies on U.S. Patent No. 4,290,105 to Cichelli et al. (hereinafter "CICHELLI") as evidence for backing up the Examiner's taking of OFFICIAL NOTICE (Office Action, p. 4). Therefore, Applicant will address this rejection as a rejection of claim 19 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and CICHELLI.

Claim 19 depends from claim 13. Without acquiescing in the Examiner's rejection of claim 19, Applicant submits that the disclosure of CICHELLI does not overcome the deficiencies in the disclosures of BURROWS and WARD set forth above with respect to claim 13. Therefore, this claim is patentable over BURROWS, WARD, and CICHELLI for at least the reasons set forth above with respect to claim 13. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 19 under 35 U.S.C. § 103(a) based on BURROWS, WARD, and CICHELLI be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 103(a) based on BURROWS and OFFICIAL NOTICE

Claim 21 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BURROWS in view of OFFICIAL NOTICE. Applicant respectfully traverses this rejection.

In the Response to Arguments section of the Office Action, the Examiner relies on U.S. Patent No. 4,290,105 to Cichelli et al. (hereinafter "CICHELLI") as evidence for backing up the Examiner's taking of OFFICIAL NOTICE (Office Action, p. 4). Therefore, Applicant will address this rejection as a rejection of claim 21 under 35 U.S.C. § 103(a) based on BURROWS and CICHELLI.

Claim 21 depends from claim 20. Without acquiescing in the Examiner's rejection of claim 21, Applicant submits that the disclosure of CICHELLI does not overcome the deficiencies in the disclosures of BURROWS set forth above with respect to claim 13. Therefore, this claim is patentable over BURROWS and CICHELLI for at least the reasons set forth above with respect to claim 20. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 21 under 35 U.S.C. § 103(a) based on BURROWS and CICHELLI be reconsidered and withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests the Examiner's reconsideration of the application and the timely allowance of the pending claims.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be

eliminated through discussions with Applicant's representative, then the Examiner is invited to contact the undersigned by telephone in order to expedite prosecution of this application.

As Applicant's remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicant's silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such assertions (e.g., whether a reference constitutes prior art, reasons to modify a reference and/or to combine references, assertions as to dependent claims, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such assertions/requirements in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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